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EXAMINER

PICH, PONNOREAY

ART UNIT PAPER NUMBER

2135

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/878,336

Applicant(s)

SEKI ET AL.

Examiner

Ponnoreay Pich

Art Unit

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-37 are pending. Indications of allowable subject matter from the last office action are withdrawn due to newly discovered prior art (Nichols). Any inconvenience is regretted. Any well known art statements made in the prior office actions not specifically and adequately traversed by applicant are taken as admittance of prior art as per MPEP 2144.03.

Response to Amendments and Arguments

Applicant's amendments and arguments were fully considered, but are moot in view of new rejections presented below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 7, 2, 8, 3, 9, 13, 17, 21, 14, 18, 22, 15, 19, 23, 16, 20, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beasley et al (US 5,721,842) in view of applicant's admittance of prior art, herein referred to as AAPA, and further in view of Nichols (US 7,039,810).

Claims 1 and 7:

As per claim 1, Beasley discloses:

1. A connecting unit, i.e. switch 60, that connects each terminal to a corresponding first computer in a default status, and switches a connection destination of the terminal to the at least one first computer or the shared computer when a connection switching request transmitted from the at least one terminal has been received (Fig 1, item 60 and col 2, lines 56-64). *Note that each of computers 54, 55, and 56 in Figure 1 are accessible by any of terminals/workstations 62, 64, and 66. Thus, any one of computers 54, 55, and 56 can be considered the shared computer and any computer not considered the shared computer is considered the first computer.*
2. A security unit that executes, for each terminal, identification processing of data that has been received from any one terminal and output to the at least one first computer to the shared computer (Fig 2B; col 1, lines 45-61; col 3, lines 4-16; col 4, lines 39-52; and col 6, lines 43-57), the identification processing including utilizing an identifier corresponding to a connector through which the at least one terminal is connected to encode a received key code (Fig 2B; col 5, lines 39-52; and col 6, lines 11-29 and 43-57).

Beasley does not explicitly disclose the first computer/at least one first computer is a private computer/at least one private computer corresponding to the at least one terminal. Beasley also does not explicitly disclose enciphering of key codes i.e. for purpose of hiding its meaning.

However, AAPA discloses a conventional, i.e. prior art, system and method where a private computer and a network computer is prepared for each user, where switch controls are used to switch between the user's use of the private computer and the network computer (specification: p2, lines 2-31). In light of this, at the time applicant's invention was made, it would have been obvious to one skilled in the art to modify Beasley's invention such that the first computer disclosed by Beasley is a private computer that corresponds to a specific terminal. One skilled would have been motivated to do so because a user having a private computer, not shared with any other user, was conventional in the art and would allow a user to work more efficiently since the computer is not shared with others.

AAPA also does not disclose enciphering key codes, i.e. for purpose of hiding its meaning. However, Nichols discloses that data enciphering was commonly used to add security and privacy to data transmitted across a network (col 2, lines 54-61). At the time applicant's invention was made, it would have been obvious to one of ordinary skill in the art to not only encode key code, but also encipher it before it was transmitted across the switching network seen in Figure 1 of Beasley. One skilled would have been motivated to do so because enciphering data transmitted would add security and privacy to the transmitted data (Nichols: col 2, lines 54-61).

Claim 7 is substantially similar to claim 1 and is rejected for the same reasons given for claim 1. The difference is that claim 7 is directed towards a method implemented via the device of claim 1.

Claims 2 and 8:

As per claims 2 and 8, Beasley further discloses:

1. An encoding unit that executes an encoding processing, local to each terminal, of data that has been transmitted from any one terminal and received by the switching device (col 1, last paragraph-col 2, line 4; col 3, lines 36-55; and col 6, lines 43-57).
2. A first decoding unit that executes a deciphering processing corresponding to the encoding processing local to the at least one terminal corresponding to the at least one first computer, of the data that has been output from the switching device to any one first computer (col 1, lines 56-61 and Fig 1, item 70).
3. A second decoding unit that executes a decodes processing corresponding to the encoding processing local to the at least one terminal currently connected to the shared computer, of the data that has been output from the switching device to the shared computer (col 1, lines 56-61 and Fig 1, item 70). *Note that there are multiple decoding units disclosed by Beasley (Fig 1, items 70).*

The limitation that the first computer is a private computer is obvious to the combination invention of Beasley, AAPA, and Nichols as discussed in the rejection of claims 1 and 7. Also, as discussed in claims 1 and 7, though Beasley discloses encoding and decoding of data via encoding and decoding units, he does not explicitly disclose the units enciphering and deciphering data. However, as Nichols discloses enciphering of transmitted data (col 2, lines 54-61) and deciphering of data that had been enciphered (col 4, lines 30-31 and 61-64), it would have been obvious to one

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skilled in the art to have modified Beasley's invention such that the encoding and decoding units he disclosed also performed enciphering and deciphering processing. One skilled would have been motivated to do so because use of enciphering and deciphering processing as taught by Nichols within Beasley's invention would secure transmitted data (Nichols: col 2, lines 54-61).

Claims 3 and 9:

As per claims 3 and 9, most of the limitations recited therein have already been addressed in the rejections for claims 1-2 and 7-8. The limitations further recited in the claims that have not yet been addressed are also disclosed by Nichols:

1. Wherein the enciphering unit bit shifts the received data to a first direction between a highest bit and a lowest bit by only a number of each terminal (col 3, lines 32-61).
2. The first deciphering unit bit shifts an output data to a second direction opposite to the first direction by the number of a terminal corresponding to the at least one private computer (col 3, lines 32-61).
3. The second deciphering unit bit shifts the output data to a second direction opposite to the first direction by the number of a terminal currently connected to the shared computer (col 3, lines 32-61).

Essentially, the above recited limitations discusses enciphering and deciphering data by rotating the data in one direction to encipher and in the opposite direction to

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decipher. The amount to rotate is controlled by a number of each terminal, i.e. an enciphering/deciphering key associated with the terminal.

In the cited passages, Nichols discloses that the most commonly employed encryption method involves rotation of bits/bytes of the data stream. One skilled should appreciate that deciphering is the inverse operation of enciphering, thus if one were to encipher by rotating bits via a certain number of places, to decipher one must rotate in the opposite directed the same number of places. To know how much to rotate to decipher an enciphered data requires the use of a key which contains this information. The cited passage of Nichols also discloses the use of keys to encrypt and decrypt data. A key is a number, thus as the key is used to encipher and decipher data transmitted by a terminal, the key reads on a number of the terminal.

In light of the above disclosure by Nichols, it would have been obvious to one skilled in the art to further modify Beasley's invention according to the limitations recited in claims 3 and 9. One skilled would have been motivated to encipher and decipher via bit shifting data because Nichols discloses it is the most commonly employed cryptographic method (col 3, lines 32-33). One skilled would have been motivated to bit shift by a number of each terminal because use of an encryption key would ensure that data could properly be encrypted and decrypted.

Claim 13:

Beasley discloses at least one first computer (Fig 1, item 52); at least one terminal corresponding to the at least one first computer (Fig 1, item 62); at least one shared computer connected to a network (Fig 1, item 54); and a switching device

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comprising limitations as recited in claim 1 (Fig 1, item 60). The rejection of the limitations of the switching device recited in claim 13 can be found in the rejection of claim 1. Note that in Figure 1 of Beasley, one can see that the switching device 60 is disposed between at least one first computer and the terminal, for relaying data between the terminal and the at least one shared computer.

Beasley does not disclose the at least one first computer being a private computer. However, as discussed in the rejection of claim 1, private computers corresponding to a terminal were well known in the art at the time applicant's invention was made as admitted by applicant, thus the limitation is obvious to the combination invention of Beasley, AAPA, and Nichols.

Claim 17:

As per claim 17, the limitations recited therein are a combination of the limitations recited in claims 13 and 2, which were discussed as being obvious to the combination invention of Beasley, AAPA, and Nichols.

Claim 21:

As per claim 21, the limitations recited there in are a combination of the limitations recited in claims 17 and 3. Claim 21 is rejected for the same reasons given in claims 17 and 3.

Claims 14, 18, and 22:

Beasley does not explicitly disclose wherein at least one shared computer is connected to a second network independent of said network. However, the examiner take official notice that computer systems and networks wherein at least one computer

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(shared or private) that is connected to a further/second network independent of said network have existed before the time applicant's invention was made. One of ordinary skill in the art would be motivated to connect a shared computer to a further independent network as this would allow more access of information for the users of Beasley's invention.

Claim 15, 19, and 23:

Beasley does not explicitly disclose wherein the network is the Internet. However, the examiner takes official notice that a network being the Internet, which is connected to a computer of any sort has been known to exist before the time applicant's invention was made. One of ordinary skill in the art would be motivated to connect a shared computer to a further independent network where the network is the Internet because it would allow users of Beasley's invention to have access to one of the largest sources of information on the planet.

Claim 16, 20, and 24:

Beasley does not explicitly disclose wherein the second network is an intranet. However, the examiner takes official notice that a further/second network being an intranet has existed before the time applicant's invention was made. One of ordinary skill in the art would be motivated to connect a shared computer to a further independent network as this would allow more access of information for the users of the Beasley's invention. Some of the information may be obtained only by being connected to an intranet, which contains restricted information.

Claims 4, 10, and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beasley et al (US 5,721,842) in view of applicant's admittance of prior art, herein referred to as AAPA, and further in view of Nichols (US 7,039,810) and further in view of Wilder et al (US 6,557,170).

Claims 4 and 10:

Beasley further discloses a switching unit that cancels a connection of the terminal when the terminal has been connected to the shared computer; switches the connection to first computer corresponding to the terminal, that cancels a connection of the terminal when the terminal has been connected to the first computer corresponding to the terminal (Fig 1, item 60 and col 10, lines 42-49). Note that the first computer being a private computer is obvious to the combination of Beasley, AAPA, and Nichols, as previously discussed.

Beasley does not explicitly disclose a detecting unit that detects whether or not a key code of a predetermined key transmitted from any terminal has been received in a predetermined number during a predetermined period of time. However, this limitation reads on the use of hot keys. Hot keys are keys codes or combination of key codes that are detected in a predetermined number during a predetermined period of time and if detected, causes a predetermined action to occur. Wilder discloses this limitation (col 2, lines 19-49; col 5, lines 54-64; and col 6, lines 28-35).

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At the time applicant's invention was made, it would have been obvious to one skilled in the art to further modify Beasley's invention according to the above limitations by incorporating use of hot keys. One skilled would have been motivated to do so because hot keys would allow a user to have short cuts in causing certain actions to occur with Beasley's switching device, which is convenient for the user.

Beasley also does not explicitly disclose the switching unit disregarding the connection switching request when a terminal other than a corresponding terminal has already been connected to the shared computer, at a time when the detecting unit has performed detecting. However, it was well known in the art to disregard a request to a connect to a device when the device is already busy or in use. At the time applicant's invention was made, it would have been obvious to further modify Beasley's invention such that it disregarded connection switching requests when a terminal other than the corresponding terminal has already been connected to the shared computer, at a time when the detecting unit has performed detecting. One skilled would have been motivated to do so because it would ensure that only one person at a time is using a computer, which would enable a computer to function more efficiently since it does not have to share resources among multiple users.

Claim 25:

As per claim 25, the limitations recited therein are a combination of what is recited in claims 13, 1, and 4. Claim 25 is rejected for the same reasons given in claims 13, 1, and 4.

Claims 26-28:

Claims 26-28 recite limitations similar to what is recited in claims 14-16 respectively and are rejected for the same reasons.

Claims 5-6, 11-12, and 29-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beasley et al (US 5,721,842) in view of applicant's admittance of prior art, herein referred to as AAPA, and further in view of Nichols (US 7,039,810) and further in view of Onsen (US 6,473,811).

Claims 5 and 11:

Beasley does not disclose a posting unit that posts a connection status of the shared computer to each terminal. However, Onsen discloses this limitation (col 1, lines 29-39). One of ordinary skill in the art at the time of the applicant's invention would be motivated to incorporate a posting unit which displays connection status into a switching device as that would allow users to see which computers are already busy/connected to another terminal and thereby know to not waste time trying to connect to the busy computers.

Claims 6 and 12:

Onsen discloses the posting unit posts to each terminal that the shared computer is currently being used, when the shared computer is currently being used (col 1, lines 29-39).

Claim 29:

As per claim 29, the limitations recited therein are similar to what is recited in claims 13, 1, and 5. Claim 29 is rejected for the same reasons given in claims 13, 1, and 5.

Claims 30-32:

Claims 30-32 recite limitations similar to what is recited in claims 14-16 respectively and are rejected for the same reasons.

Claim 33:

As per claim 33, the limitations recited therein are similar to what is recited in claims 13, 1, and 6. Claim 33 is rejected for the same reasons given in claims 13, 1, and 6.

Claims 34-36:

Claims 34-36 recite limitations similar to what is recited in claims 14-16 respectively and are rejected for the same reasons.

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beasley et al (US 5,721,842) in view of Nichols (US 7,039,810).

Claim 37:

Beasley discloses:

1. A connecting unit connecting a terminal to a private computer or a shared computer (col 2, lines 56-64 and Fig 1, item 60).

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2. An identification processing unit, i.e. pod 70, coupled to the connecting unit, utilizing an identifier corresponding to a connector through which the terminal is connected to encode a received code (Fig 2B; col 5, lines 39-52; and col 6, lines 11-29 and 43-57).

Beasley does not explicitly disclose the identification unit enciphering received code. However, Nichols discloses that data enciphering was commonly used to add security and privacy to data transmitted across a network (col 2, lines 54-61). At the time applicant's invention was made, it would have been obvious to one of ordinary skill in the art to not only encode key code, but also encipher it before it was transmitted across the switching network seen in Figure 1 of Beasley. One skilled would have been motivated to do so because enciphering data transmitted would add security and privacy to the transmitted data (Nichols: col 2, lines 54-61).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ponnoreay Pich whose telephone number is 571-272-7962. The examiner can normally be reached on 9:00am-4:30pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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